1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6



181 In the following descriptions of the native culture there are ample indications of barbarism and savagery. In their untrammeled freedom and isolation the natives expressed these aspects of their nature to the utmost. In a true evaluation of the people, however, adequate appreciation of their cultured traits and innate capacities must be measured along with the more spectacular barbaric characteristics which have heretofore been almost exclusively stressed. The ancient culture gives ample proofs of the presence of admirable human traits, as does also the make-up of the modern native, product of generations of demoralizing influences though he be. Some of these traits are manual and technical skill and the ideal of perfection in work; ability to organize and to accomplish on a large scale; characteristics such as loyalty, generosity, and gratitude in friendly personal relationship; a keen appreciation of individual integrity expressed in personal independence with clear conceptions of justice and honor; high refinements, subtleties, and graces in social and æsthetic expression; and capacity for rational and imaginative thought belonging to a very high order of intelligence.

## ENVIRONMENT AND HISTORY

### THE ISLANDS

131 The Marquesas lie between parallels 7°50′ and 10°35′ south of the Equator, and meridians 138°25′ and 140°50′ west of Greenwich (See fig. 1). In other words the group is from one to three degrees north of the latitude of Lima, Peru, and from fifteen to eighteen degrees east of the longitude of the island of Hawaii. The principal islands are Hiva Oa, Tahu Ata, Fatu Hiva, Ua Huka, Ua Pou, and Nuku Hiva. (See figs. 2-7.)

133 The group lies in the course of the westward equatorial current from the coast of South America. Of currents we read in the Pacific Islands Pilot (28, p. 177):

> The current, impelled by the prevailing trade wind, is usually to the westward, between west-northwest and west-southwest, at a rate of about half a knot an hour, sometimes, however, increasing to three knots. If the wind dies away or changes to the westward, the current slacks, and during persistent westerly winds its direction changes. After a week of northwesterly winds, a current setting to the eastward at the rate of three knots were observed in Bordelais Strait, between Hiva oa and Tau ata.

● 132 It is the trade winds which bring the islands their rain, the moisture borne by them being caught and precipitated by the high mountains. To quote again the same authority (28, pp. 176-7):

1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6



From April to October the southeast trade wind, called by the natives *tua to ha*, prevails in the vicinity of these islands. The general direction is east-southeast, but it varies between east and south-southeast. . . . The wind sometimes gets to the west of north, when it is apt to turn into a gale. Gales are, however, of rare occurence, generally occurring in December, if at all. 132

As a consequence of the fact that this precipitation is much heavier at the windward than at the leeward ends of the two large islands, Hiva Oa and Nuku Hiva, the flora is much more luxuriant at these ends, and a diminution of the luxuriance and a change in the nature of the flora due [137]

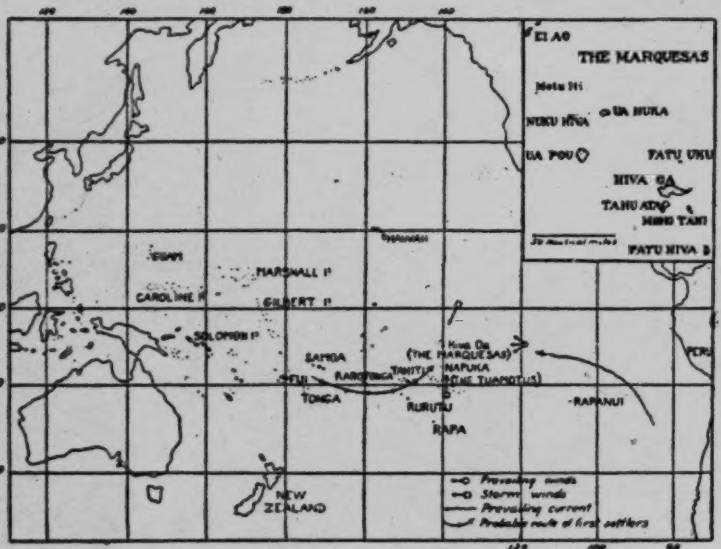


FIGURE 1.—Map showing location of the Marquesas.

to decreasing rainfall is seen from east to west. This tendency is to be observed in each of the inhabited islands, but there are individual differences in certain of these which should be noted. Fatu Hiva is known for its wetness. Its position makes it the first island to tap the southeast trade winds. Eastern Hiva Oa is wet, Western Hiva Oa, dry, and Ua Huka is also dry because its mountains are low. Nuku Hiva is wet on its eastern section while all the western plateau is practically desert. Ua Pou is the dryest of all the islands, its rain being cut off by Hiva Oa, Tahu Ata, and Fatu Hiva. Dryness amounts to dessication in times of drought. There is no regular rainy season in the group, the rain coming most commonly from January to July, and intermittently. But the group is

1: Handy E-5 (1920-1921)1923 OX6 Marquesas OX6



132 subject to severe droughts at times. A drought of four years' duration has recently broken in Hiva Oa, and not long ago there was one in Ua Pou that lasted seven years. The uncertainty of rainfall and these occasional droughts have affected directly the native culture.

The climate of these islands is rather subtropical than tropical. Like all the small Pacific islands that lie in the course of the trade winds, they are never torrid. At times during rains the atmosphere may be humid, but for the most part it is dry. The temperature varies only about twenty degrees the year round, approximately from 70° to 90° F. The equable climate of the group is due to the cooling of the trade winds and the tempering of the sea.

133 [134] The Marquesas Islands are volcanic. The material is black lava, very coarse in some places and very fine grained in others; red tufa; basalt; and conglomerate deposits. The rapid degeneration, crumbling, falling away, and eroding of the softer materials lead to the coasts and valley walls being precipitous, high and rugged. The harder basalt in many instances forms jagged spines. The ridges and spurs leading from the main mountainous backbone, which may be said, roughly, to traverse the mid-portion of each of the islands in the direction of its greatest length, run directly to the sea. Between them are the valleys, cut deep by the streams, which drain the mountainous interior. The charts of the Marquesas are misleading in that those regions of the islands which could not be viewed from the sea, whence the coastal surveys were made, are marked, "Plateau." There is no genuine plateau region: the interiors of all the islands are mountainous. The maximum elevations of the main islands in feet are as follows: Fatu Hiva, 3151; Tahu Ata, 3280; Hiva Oa, 3904; Ua Pou, 4040; Ua Huna, 2305; Nuku Hiva, 3890. There are no protecting coral reefs, the shores being too precipitous, although a little coral grows in the bottoms of some bays. Hence the coast is unprotected and there are few beaches. There is practically no level land either along the shores or in the valley bottoms.

The marked influence of environment on the people and on their culture may be noted briefly. The isolation of deep valleys, inacessibility by land and by sea, had much to do with the tribal development, continuous warfare, and the lack of a nationalistic tendency in political organization such as that which developed in Tonga, Tahiti, the Cook group, and Hawaii. Since the region is not suited to agricultural development, the [251] droughts and consequent famines brought about the preservation of [262] breadfruit paste in holes in the ground, breadfruit being the most prolific of all foods growing in these islands, and hence, the staple. The non-

4: Fernandez de Quiros T-5 (1595)1904
OX6 Marquesas OX6



778 Wanting to take other things, the natives interfered, saying they must not take anything, showing that they respected that house and the figures.

501 Outside the village they had some very long and well-made canoes of a single tree, with the form of a keel, bow, and stern, and with boards well fastened with ropes made from cocoa fibre. In each one there is room for thirty or forty natives as rowers; and they gave us to understand, when they were asked, that they went in these large canoes to other lands. They work with adzes, which they make [321 of thick fish-bones and shells. They sharpen them with 324] large pebbles, which they have for the purpose.

132 The temperature, health, vigour, and corpulence of these people tell what the climate must be under which they live. One suffers cold at night, but the sun does not cause much molestation by day. There were some showers, not heavy; dew was never felt, but very great dryness, so much so that wet things, when left out all night on the ground, were found quite dry in the morning. But we could not tell whether this was so all the year round.

231 They saw pigs, and fowls of Castille, and the fishery is certain wherever there is sea.

241 The trees which have been mentioned as being in the open space before the village yield a fruit which reaches to the size of a boy's head. Its colour, when it is ripe, is a clear green, and when unripe it is very green. The rind has crossed scales like a pineapple, its shape not quite round, being rather more narrow at the end than near the stem. From the stem grows a leaf-stalk reaching to the middle of the fruit, with a covering sheath. It has no core nor pips, nor anything uneatable except the skin, and that is thin. All the rest is a mass of pulp when ripe, not so [262] much when green. They feed much upon it in all sorts of ways, and it is so wholesome that they call it white food. It is a good fruit and of much substance. The leaves of

6: Lisianesky T-5 (1803-1806) 1814 OX6 Marquesas OX6



to the sides, by inserting a piece of small twine through numerous holes. The head resembles that of a galley, and to the stern a crooked piece of wood is fixed, through which runs the sheet of a triangular sail, made of matting. These narrow boats are well balanced by three long poles laid across, to the ends of which, on one side, is fastened a piece of wood.

The island of Noocahiva produces all the necessaries of life. It has excellent fresh water, and in such abundance, that it flows down in cascades from different elevations, greatly tending to beautify in many places the views of the coast The climate is so salubrious that, by Roberts's account, many live here to the age of a hundred years. I saw myself the king's mother, who was about eighty, and did not yet think herself very old.

Having had but little leisure for minute inquiries respecting the vegetable kingdom in this part of the globe, I shall content myself with describing the few articles only that came within my observation.

## TREES.

*Toomoomey*, or Bread-fruit-tree. The branches of this tree spread out widely, and the leaves resemble those of the fig-tree, but are of a larger size, and of a deeper green. Its fruit is of an oblong figure, measuring lengthwise from five inches and a half to six inches and a half, and breadthwise from four to five inches; it is of a light green colour, but turns black after two or three days keeping. This useful tree, I was told, bears fruit here three times in the year. The first and the best crop, called by the natives mainooé, ripens about our January. The second, which

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6

[p 263]

# THE MATERIAL CULTURE OF THE MARQUESAS ISLANDS

BY

RALPH LINTON

## INTRODUCTION

### GEOGRAPHIC SKETCH

103 The Marquesas include thirteen islands. The eight habitable islands form geographically two divisions—the Northern Division, which includes Ei Ao, Nuku Hiva, Ua Huka, and Ua Pou; and the Southern Division, which includes Hiva Oa, Tahu Ata, Moho Tani, and Fatu Hiva. (See fig. 1.) Ei Ao and Moho Tani, although formerly inhabited, are now deserted.

[131]
[132]

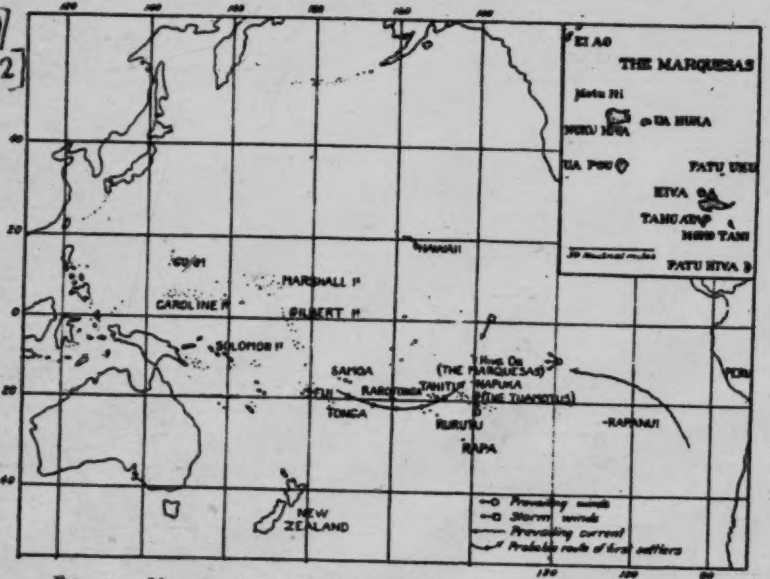


FIGURE 1.—Map of a part of the Pacific showing the position of the Marquesas and the principal islands of the group. The islands Ei Ao, Motu Iti, Nuku Hiva, Ua Huka and Ua Pou, constitute the Northern Division of the Marquesas, and the islands Fatu Uku, Hiva Oa, Tahu Ata, Moho Tani, and Fatu Hiva, the Southern Division.



[Note: this source has two sets of page numbers]

7: Linton E-5 (1920-1921) 1923 OX6 Marquesas OX6



133 The habitable islands are of volcanic origin. At present there are no signs of volcanic activity and earthquakes are unknown, but on some islands old sea caves now several meters above high water level suggest that elevation still continues. The topography of all the large islands is similar, each having a high central mountain chain from which sharp ridges, often ending in sheer cliffs, extend to the sea. With a few exceptions, the valleys are short and narrow. There is no coastal shelf and many of the valleys are accessible only from the sea. Nuku Hiva and Hiva Oa, the largest islands of the group, have so-called plateaus at altitudes of from one to two thousand feet. These plateaus include some areas of comparatively level ground, but are for the most part eroded into innumerable small, steep side valleys, which render traverse difficult, even for a man on foot.

132 The climate of the Marquesas is without extremes of heat or cold, the mean annual temperature being between 75 and 80 degrees Fahrenheit. Hurricanes, the scourge of the Tuamotus, are rare, but lying north of the belt of seasonal rains, the islands are visited by destructive droughts which have been known to last three years. Even in favorable years the climate throughout most of the group is dry rather than humid. There is a progressive decrease in rainfall from south to north; Fatu Hiva, the southernmost island, is well watered but Ei Ao, the northermost, is arid. The prevailing winds are easterly and the westerly sides of the most of the islands are semi-arid, with few running streams.

137 The marked differences in the vegetation on different islands and on different parts of the same island correspond to variations in rainfall. On Fatu Hiva a dense growth of vegetation mantles the almost vertical sides of the mountains and fills the valleys with thickets. East of the high mountain ridge on Hiva Oa the valleys are choked with thick bush and the higher slopes are covered with forests containing many tree ferns. West of the ridge the tree ferns disappear completely, giving place to stunted guava scrub and upland reed, and large areas are covered with matted fern scarcely a foot high. Wherever a depression serves to collect the moisture there are open groves of pandanus or fau (tree hibiscus) while the higher ridges are crowned with straggling clumps of casuarina. The slopes of the deeper valleys are covered with a growth of large trees beneath which is little or no undergrowth and only along the water courses, where the fau grows in tangled masses, is there any approach to jungle. Were it not for the occasional clumps of palms in the valleys the visitor might imagine himself in the hills behind San Francisco rather than on an island within ten degrees of the equator. Ei Ao, the northernmost island, has the least rain, and its bowl-like top is covered with short grass and scattered groves of trees so open that a man on horseback could pass anywhere with ease.

10: Linton E-5 (1920-1921)1939
OX6 Marquesas OX6



168 child in the group. On Tahuata, the island next to the one on which I was living, there were over two hundred deaths for every birth.

## Environment and Economy

133 The Marquesas are a series of high islands, very rugged and
775 mountainous. At the Western end of Hiva Oa, a cliff, straight as the wall of a house, rises from the sea to a height of 2,000 feet. The natives believe this to be the place from which the spirits of the dead leap off to the bottom of the sea, whence they travel eastward to Hawaiki, the mythical land from which
[793] all Polynesians came. At the top of this cliff lived a single priest whose duty it was to watch this leap and presumably say farewell to the ghost as he passed on to the next world. The priest
[211] kept records of each death and birth by means of a long cord, tying a knot for each birth and untying a knot for each death, thus keeping a sort of informal census for the group.

133 The islands have no coastal shelf; the coast goes down with no barrier reef, making fishing difficult and dangerous. The interior of the islands is extremely rugged, consisting chiefly of sections of blown-up volcanic craters with peaks four to five thousand feet high. Many of the larger islands have never been traversed even today. The coast is made up of narrow valleys cut off from one another by ridges so high and steep that in many cases one can get from one valley to another only by sea.
137 There is considerable timber in the valleys and also on the slopes at the eastern ends of the islands. The uplands are covered by a growth of low ferns, across which one can see for many miles. There are a few ironwood trees, but most of the high country is open and waterless.

● 132 Since the islands are only ten degrees south of the equator,
731 the climate is warm, with little seasonal change. Being north of the trade winds and consequently devoid of seasonal rains, the islands are subjected from time to time to long and destructive droughts, which lead to serious crop failures and even to shortage of drinking water, as the streams go dry. This state

10: Linton E-5 (1920-1921)1939
OX6 Marquesas OX6



of affairs has had considerable effect on the life of the people. In good seasons there was plenty of food; but one of these droughts, which might last as long as three years, used up all the stores of food and caused genuine starvation; sometimes it drove the natives to hunger cannibalism. A severe drought of this sort could cut the population by a third.

Agriculture was practiced under difficulties because of the steep slopes, very little of the land being level enough for irrigation by the crude native methods. The staple crops in other Polynesian countries, the taro and the yam, were of very little importance here. The Marquesans were dependent almost entirely upon the tree crops—breadfruit, cocoanuts, bananas—and on sugarcane. Another important crop was the paper mulberry, a domesticated tree with very long slender stems from which the natives made their clothing. These tree crops required no intensive cultivation. When a child was born, the father planted a breadfruit tree and a cocoanut tree for the new addition to the family. These trees would provide the child with food as long as he lived. All trees and gardens were individually owned and inherited. A certain right of eminent domain was invested in the chief, but he was hesitant to take a garden from even the lowliest native for fear of retaliation through magic.

In good years there were four breadfruit crops, the first of which was gathered communally. When the fruit was ready for gathering, the chief sent out messengers announcing the event; everyone turned out to gather the crop, which was cut up, fermented, and stored in great communal pits hidden outside the village so that they would not be discovered in case of an enemy raid. The pits were enormous; I have seen some as much as twenty feet across and twenty feet deep, cut into rocky soil. The pit was lined with leaves, and the breadfruit paste was wrapped in packages which preserved it so well that it never became too old for consumption. The entire yield of the first crop went into these large pits, which were opened only in time of famine. The second crop was similarly preserved, but was stored in the household pits. There were no rules governing